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APPLICATION

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FOR UNITED STATES LETTERS PATENT

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SPECIFICATION

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18 TO ALL WHOM IT MAY CONCERN:

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20 BE IT KNOWN THAT I, **Charles D. Black**, a citizen of the United States, have
21 invented a new and useful material dispenser system of which the following is a
22 specification:

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1
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3 **Material Dispenser System**
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6 **CROSS REFERENCE TO RELATED APPLICATIONS**
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8 I hereby claim benefit under Title 35, United States Code, Section 119(e) of
9 United States provisional patent application **Serial Number 60/432,437** filed
10 **December 10, 2002.** The 60/432,437 application is currently pending. The
11 60/432,437 application is hereby incorporated by reference into this application.
12
13

14 **STATEMENT REGARDING FEDERALLY**
15 **SPONSORED RESEARCH OR DEVELOPMENT**
16

17 Not applicable to this application.
18
19

20 **BACKGROUND OF THE INVENTION**
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22
23

24 **Field of the Invention**
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26 The present invention relates generally to elongate material dispensers and more
27 specifically it relates to a material dispenser system for efficiently dispensing elongate
28 material and providing an automatic system for preventing accidental dispensing of
29 elongate material.
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31

1 **Description of the Related Art**

2

3 Elongate material dispensers have been in use for years and dispense various
4 types of elongate material such as barricade tape, string and the like. Conventional
5 elongate material dispensers may be comprised of rotating reels. Conventional
6 elongate material dispensers typically allow the user to secure the loose end of the
7 elongate material after dispensing to prevent accidental dispensing of the elongate
8 material.

9

10 One problem with conventional elongate material dispensers is that they do not
11 provide an automatic system for preventing accidental dispensing of the elongate material.
12 Another problem with conventional elongate material dispensers is that they are not
13 capable of being easily adjusted to frictionally dispense the elongate material. Another
14 problem with conventional elongate material dispensers is that they are relatively
15 expensive to manufacture. A further problem with conventional elongate material
16 dispensers is that they can be time consuming to load and reload the elongate material.

17

18 While these devices may be suitable for the particular purpose to which they
19 address, they are not as suitable for efficiently dispensing elongate material.
20 Conventional elongate material dispensers do not adequately prevent the accidental
21 dispensing of elongate material.

22

23 In these respects, the material dispenser system according to the present
24 invention substantially departs from the conventional concepts and designs of the prior
25 art, and in so doing provides an apparatus primarily developed for the purpose of
26 efficiently dispensing elongate material.

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BRIEF SUMMARY OF THE INVENTION

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4 In view of the foregoing disadvantages inherent in the known types of elongate
5 material dispensers now present in the prior art, the present invention provides a new
6 material dispenser system construction wherein the same can be utilized for efficiently
7 dispensing elongate material.

8

9 The general purpose of the present invention, which will be described
10 subsequently in greater detail, is to provide a new material dispenser system that has
11 many of the advantages of the elongate material dispensers mentioned heretofore and
12 many novel features that result in a new material dispenser system which is not
13 anticipated, rendered obvious, suggested, or even implied by any of the prior art
14 elongate material dispensers, either alone or in any combination thereof.

15

16 To attain this, the present invention generally comprises a first prong and a
17 second prong resiliently connected by a base in a substantially U-shaped structure.
18 The prongs each have a shoulder and a jaw that receive a spool between thereof. To
19 load a spool, the user compresses the handles of the prongs thereby allowing insertion
20 of the distal portions of the prongs through the core of the spool. To dispense material
21 from the spool, the user compresses the handles of the prongs thereby allowing free
22 rotation of the spool upon the prongs. If the user desires tension within the elongate
23 material being dispensed, the handles are allowed to expand slightly so that the prongs
24 frictionally engage the core of the spool. When it is desired not to have elongate
25 material dispensed, the user allows the prongs to expand outwardly thereby frictionally
26 engaging the core of the spool to prevent rotation of the spool.

27

28 There has thus been outlined, rather broadly, the more important features of the
29 invention in order that the detailed description thereof may be better understood, and

1 in order that the present contribution to the art may be better appreciated. There are
2 additional features of the invention that will be described hereinafter and that will form
3 the subject matter of the claims appended hereto.

4

5 In this respect, before explaining at least one embodiment of the invention in
6 detail, it is to be understood that the invention is not limited in its application to the
7 details of construction and to the arrangements of the components set forth in the
8 following description or illustrated in the drawings. The invention is capable of other
9 embodiments and of being practiced and carried out in various ways. Also, it is to be
10 understood that the phraseology and terminology employed herein are for the purpose
11 of the description and should not be regarded as limiting.

12

13 A primary object of the present invention is to provide a material dispenser
14 system that will overcome the shortcomings of the prior art devices.

15

16 A second object is to provide a material dispenser system for efficiently
17 dispensing elongate material.

18

19 Another object is to provide a material dispenser system that provides an
20 automatic system for preventing accidental dispensing of elongate material.

21

22 An additional object is to provide a material dispenser system that is capable of
23 dispensing various types of elongate material such as tape, string and the like.

24

25 A further object is to provide a material dispenser system that has no rotating
26 components.

27

1 Another object is to provide a material dispenser system that allows for a user
2 to maintain a desired level of tension upon the elongate material to prevent excess
3 material from unwinding.

4

5 A further object is to provide a material dispenser system that allows for
6 efficient loading and reloading of elongate material.

7

8 Other objects and advantages of the present invention will become obvious to the
9 reader and it is intended that these objects and advantages are within the scope of the
10 present invention.

11

12 To the accomplishment of the above and related objects, this invention may be
13 embodied in the form illustrated in the accompanying drawings, attention being called
14 to the fact, however, that the drawings are illustrative only, and that changes may be
15 made in the specific construction illustrated and described within the scope of the
16 appended claims.

1

2 **BRIEF DESCRIPTION OF THE DRAWINGS**

3

4 Various other objects, features and attendant advantages of the present
5 invention will become fully appreciated as the same becomes better understood when
6 considered in conjunction with the accompanying drawings, in which like reference
7 characters designate the same or similar parts throughout the several views, and
8 wherein:

9

10 FIG. 1 is an upper perspective view of the present invention.

11

12 FIG. 2 is a front view of the present invention in a fully expanded state.

13

14 FIG. 3 is a front view of the present invention in a compressed state.

15

16 FIG. 4 is a side view of the present invention.

17

18 FIG. 5a is an upper perspective view of the present invention with a single
19 spool positioned about the prongs.

20

21 FIG. 5b is an upper perspective view of the present invention with two spools
22 positioned about the prongs.

23

24 FIG. 6 is an upper perspective view of the present invention being utilized to
25 dispense tape from a spool.

26

27 FIG. 7 is an end view of the present invention.

28

29 FIG. 8 is a cross sectional view taken along line 8-8 of Figure 7.

1

2 FIG. 9 is the cross sectional view of Figure 8 with the prongs compressed to
3 allow for rotation or removal of the spool.

4

5 FIG. 10 is a side cut away view of the present invention illustrating the loading
6 or removal of a spool.

7

8 FIG. 11 is an upper perspective view of a first alternative embodiment.

9

10 FIG. 12 is an upper perspective view of a second alternative embodiment of the
11 present invention.

12

1

2 DETAILED DESCRIPTION OF THE INVENTION

3

4 A. Overview

5 Turning now descriptively to the drawings, in which similar reference
6 characters denote similar elements throughout the several views, FIGS. 1 through 12
7 illustrate a material dispenser system 10, which comprises a first prong 20 and a
8 second prong 30 resiliently connected by a base 50 in a substantially U-shaped
9 structure. The prongs 20, 30 each have a shoulder and a jaw that receive a spool 12
10 between thereof. To load a spool 12, the user compresses the handles 28, 38 of the
11 prongs 20, 30 thereby allowing insertion of the distal portions of the prongs 20, 30
12 through the core 14 of the spool 12. To dispense material from the spool 12, the user
13 compresses the handles 28, 38 of the prongs 20, 30 thereby allowing free rotation of
14 the spool 12 upon the prongs 20, 30. If the user desires tension within the elongate
15 material being dispensed, the handles 28, 38 are allowed to expand slightly so that the
16 prongs 20, 30 frictionally engage the core 14 of the spool 12. When it is desired not to
17 have elongate material dispensed, the user allows the prongs 20, 30 to expand
18 outwardly thereby frictionally engaging the core 14 of the spool 12 to prevent rotation
19 of the spool 12.

20

21 B. First Prong

22 Figures 1 though 3 best illustrate the first prong 20 which has an elongate
23 structure. The first prong 20 preferably includes a first jaw 22, a first shoulder 26, a
24 first body 24 and a first handle 28 as best shown in Figures 2 and 3 of the drawings.
25 The first body 24 extends between the first jaw 22 and the first shoulder 26 as further
26 shown in Figures 2 and 3 of the drawings. A first handle 28 extends from the first
27 shoulder 26 opposite of the first body 24. The first prong 20 is preferably constructed
28 of a resilient material such as but not limited to plastic.

29

1 The first jaw **22** preferably extends transversely from the first prong **20** as
2 shown in Figures 2 and 3 of the drawings. The first jaw **22** preferably has a syncline
3 shaped structure, however various other structures may be utilized for the first jaw **22**.
4 The first jaw **22** retains the spool **12** upon the first body **24** as shown in Figure 5a of
5 the drawings.

6

7 The first shoulder **26** extends from the first prong **20** as shown in Figures 2 and
8 3 of the drawings. The shoulder may have various shapes and structures capable of
9 retaining the spool **12** upon the first body **24** as shown in Figures 8 and 9 of the
10 drawings. The first shoulder **26** preferably includes a first slot **27** that is capable of
11 receiving a distal portion of the elongate material in a frictional manner when the
12 present invention is not in use.

13

14 The first body **24** extends between the first jaw **22** and the first shoulder **26** as
15 shown in Figures 2 and 3 of the drawings. The outer portion of the first body **24** is
16 formed to rotatably and frictionally engage a core **14** of a spool **12**. The first body **24**
17 may have a tapered structure as further shown in Figures 2 and 3 of the drawings.

18

19 Figure 8 illustrates the outer portion of the first body **24** being positioned
20 substantially parallel to an inner surface of a core **14** when the first prong **20** is
21 expanded. Figure 9 illustrates the outer portion of the first body **24** positioned a
22 distance away from the inner surface of the core **14** when the first prong **20** is
23 compressed inwardly thereby allowing the spool **12** to rotate about the prongs **20, 30**.

24

25 The first handle **28** extends from the first shoulder **26** and is formed to be
26 grasped by a user's hand. The first handle **28** may have gripping members **40** to assist
27 in the gripping of the first handle **28** as shown in Figures 2 and 3 of the drawings. As
28 shown in Figures 2 and 3 of the drawings, the first handle **28** may be positioned at an
29 angle with respect to the main body.

1

2 **C. Second Prong**

3 Figures 1 though 3 best illustrate the second prong **30** which has an elongate
4 structure. The second prong **30** preferably has a structure that mirrors the first prong
5 **20** as best illustrated in Figures 2 and 3 of the drawings.

6

7 The second prong **30** preferably includes a second jaw **32**, a second shoulder
8 **36**, a second body **34** and a second handle **38** as best shown in Figures 2 and 3 of the
9 drawings. The second body **34** extends between the second jaw **32** and the second
10 shoulder **36** as further shown in Figures 2 and 3 of the drawings. A second handle **38**
11 extends from the second shoulder **36** opposite of the second body **34**. The second
12 prong **30** is preferably constructed of a resilient material such as but not limited to
13 plastic.

14

15 The second jaw **32** preferably extends transversely from the second prong **30** as
16 shown in Figures 2 and 3 of the drawings. The second jaw **32** preferably has a
17 syncline shaped structure, however various other structures may be utilized for the
18 second jaw **32**. The second jaw **32** retains the spool **12** upon the second body **34** as
19 shown in Figure 5a of the drawings.

20

21 The second shoulder **36** extends from the second prong **30** as shown in Figures
22 2 and 3 of the drawings. The shoulder may have various shapes and structures capable
23 of retaining the spool **12** upon the second body **34** as shown in Figures 8 and 9 of the
24 drawings. The second shoulder **36** preferably includes a second slot **37** that is capable
25 of receiving a distal portion of the elongate material in a frictional manner when the
26 present invention is not in use.

27

28 The second body **34** extends between the second jaw **32** and the second
29 shoulder **36** as shown in Figures 2 and 3 of the drawings. The outer portion of the

1 second body 34 is formed to rotatably and frictionally engage a core 14 of a spool 12.
2 The second body 34 may have a tapered structure as further shown in Figures 2 and 3
3 of the drawings.

4

5 Figure 8 illustrates the outer portion of the second body 34 being positioned
6 substantially parallel to an inner surface of a core 14 when the second prong 30 is
7 expanded. Figure 9 illustrates the outer portion of the second body 34 positioned a
8 distance away from the inner surface of the core 14 when the second prong 30 is
9 compressed inwardly thereby allowing the spool 12 to rotate about the prongs 20, 30.

10

11 The second handle 38 extends from the second shoulder 36 and is formed to be
12 grasped by a user's hand. The second handle 38 may have gripping members 40 to
13 assist in the gripping of the second handle 38 as shown in Figures 2 and 3 of the
14 drawings. As shown in Figures 2 and 3 of the drawings, the second handle 38 may be
15 positioned at an angle with respect to the main body.

16

17 The first prong 20 and the second prong 30 are connected together opposite of
18 the first jaw 22 and the second jaw 32 forming a space between thereof as shown in
19 Figures 1 through 3 of the drawings. The distal ends of the first handle 28 and the
20 second handle 38 are preferably connected to a base 50 or similar structure thereby
21 forming a U-shaped structure with the prongs 20, 30 preferably in a substantially
22 parallel position to one another. The base 50 preferably is constructed of a resilient
23 material such as but not limited to plastic. The base 50 may have an opening 52 for
24 allowing attachment to various objects as shown in Figures 1 through 3 of the
25 drawings.

26

1 **D. Alternative Embodiments**

2 Figures 11 and 12 illustrate two potential alternative embodiments of the
3 present invention. It can be appreciated that various other variations may be made to
4 the present invention within the spirit and scope of the present invention.

5

6 Figure 11 illustrates a first alternative embodiment wherein the first body 24
7 and the second body 34 are connected to one another by an end portion 60. The spool
8 12 is loaded/unloaded over the jaws 22, 32 wherein the jaws 22, 32 have a tapered
9 back structure and are resilient for allowing the core 14 of the spool 12 to pass over.
10 Once the spool 12 has passed over the jaws 22, 32, the jaws 22, 32 prevent the spool
11 12 from passing outwardly from the present invention.

12

13 Figure 12 illustrates a second alternative embodiment of the present invention
14 wherein the spool 12 is loaded/removed about the end of the handles 28, 38 instead of
15 the end of the first body 24 and the second body 34. The first shoulder 26 and the
16 second shoulder 36 have a smaller structure than in the preferred embodiment as
17 shown in Figure 12 to allow for the spool 12 to be passed over the shoulders 26, 36 during
18 loading/unloading of the spool 12. The first slot 27 and the second slot 37 are preferably
19 positioned within the first jaw 22 and the second jaw 32 respectively within the second
20 alternative embodiment of the invention as shown in Figure 12.

21

22 **E. Operation of Invention – Loading/Unloading Spools**

23 To load a spool 12 onto the present invention, the user first grasps the handles
24 28, 38 and compresses the handles 28, 38 towards one another. The prongs 20, 30
25 thereby taper inwardly towards one another as shown in Figure 3 of the drawings. This
26 allows for the spool 12 to be slid over the prongs 20, 30 as shown in Figure 10 of the
27 drawings. When the spool 12 is being slid over the prongs 20, 30, the inner surface of
28 the core 14 of the spool 12 will engage the jaws 22, 32 thereby further compressing the
29 distal portions of the prongs 20, 30 to allow passage of the spool 12. After the jaws

1 **22, 32** extend through the opposing end of the core **14**, the jaws **22, 32** expand thereby
2 retaining the spool **12** positioned upon the first body **24** and the second body **34** of the
3 prongs **20, 30** between the respect shoulders **26, 36**.

4

5 After the spool **12** is properly positioned about the first body **24** and the second
6 body **34** between the jaws **22, 32** and the shoulders **26, 36**, the user then releases the
7 handles **28, 38** to allow for the prongs **20, 30** to expand outwardly as shown in Figure
8 8 of the drawings. With the prongs **20, 30** extended outwardly as shown in Figures 5a,
9 8 and 9 of the drawings.

10

11 With the prongs **20, 30** extended outwardly, the first body **24** and the second
12 body **34** frictionally engage the inner surface of the core **14** to prevent rotation of the
13 spool **12**. In addition, the user preferably attaches the distal end of the elongate
14 material within either the first slot **27** or the second slot **37** to prevent accidental
15 dispensing.

16

17 To unload a used spool **12** from the present invention, the user simply
18 compresses the handles **28, 38** together and then removes the spool **12** by passing the
19 spool **12** over the jaws **22, 32** of the prongs **20, 30**.

20

21 *F. Operation of Invention – Dispensing Elongate Material*

22 To dispense the elongate material from the spool **12**, the user preferably first
23 removes the distal portion of the elongate material from one of the slots **27, 37** and
24 then attaches the distal portion of the elongate material to an object as shown in Figure
25 6 of the drawings.

26

27 The user then compresses the handles **28, 38** of the prongs **20, 30** as shown in
28 Figures 6 and 9 of the drawings thereby reducing the friction between the prongs **20,**
29 **30** and the inner surface of the core **14**. The user then is able to walk away from the

1 object the elongate material is attached to and dispense the elongate material as shown
2 in Figure 6 of the drawings.

3

4 If the user desires tension within the elongate material being dispensed to
5 prevent over-dispensing the elongate material, the user simply relaxes their grip upon
6 the handles 28, 38 thereby allowing the prongs 20, 30 to frictionally engage the core 14
7 at a level that allows rotation of the spool 12 but with a desired level of friction to
8 prevent free rotation of the spool 12.

9

10 **G. Operation of Invention – Terminating Dispensing Elongate Material**

11 To terminate dispensing of the elongate material from the spool 12, the user
12 relaxes their grip upon the handles 28, 38 thereby allowing the prongs 20, 30 to expand
13 outwardly as shown in Figure 8 of the drawings. The prongs 20, 30 expand outwardly
14 until the core 14 of the spool 12 prevents further expansion thereof. The prongs 20, 30
15 thereby frictionally engage the core 14 of the spool 12 to prevent rotation of the spool
16 12. The user then attaches the distal portion of the elongate material within one of the
17 slots 27, 37 to prevent accidental unwrapping from the spool 12 as shown in Figure 5a
18 of the drawings.

19

20 What has been described and illustrated herein is a preferred embodiment of the
21 invention along with some of its variations. The terms, descriptions and figures used
22 herein are set forth by way of illustration only and are not meant as limitations. Those
23 skilled in the art will recognize that many variations are possible within the spirit and
24 scope of the invention, which is intended to be defined by the following claims (and
25 their equivalents) in which all terms are meant in their broadest reasonable sense
26 unless otherwise indicated. Any headings utilized within the description are for
27 convenience only and have no legal or limiting effect.